



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,052	12/04/2003	Shahab M. Sayeedi	CE11765R	8941
22917	7590	04/05/2007		
MOTOROLA, INC. 1303 EAST ALGONQUIN ROAD IL01/3RD SCHAUMBURG, IL 60196			EXAMINER JAIN, RAJ K	
			ART UNIT	PAPER NUMBER
			2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/05/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/05/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Docketing.Schaumburg@motorola.com  
APT099@motorola.com

## Office Action Summary

Application No.

10/728,052

Applicant(s)

SAYEEDI, SHAHAB M.

Examiner

Raj K. Jain

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-41 is/are allowed.
- 6) ☒ Claim(s) 1-13 and 52 is/are rejected.
- 7) ☒ Claim(s) 42-51 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION*****General Remarks***

After review of the application, Examiner has decided to withdraw the Final Office Action submitted on 14 February 2007 based on an oversight of some claim issues that require appropriate action by the applicant prior to allowance. and therefore the Examiner respectfully submits this Non-Final Office Action for review and consideration by the applicant.

***Claim Objections***

Claims 42-51 are objected to because of the following informalities: The claims recite "adapted to" which does not limit the scope of the claim. Applicant is advised to remove the clause and make appropriate correction.

Claims 48 is objected to because of the following informalities: Applicant is advised to reword the claim (as an example below) to more clearly define the claimed invention;

48. (Currently amended) A mobile station (MS) comprising: a transceiver; a computer processor having computer executable instructions therein, communicatively coupled to the transceiver,

~~adapted to receive, via the transceiver~~ to receive, data transmission service from a serving cell via a forward link of the serving cell; and adapted to determine to switch from the serving cell to a target cell for data transmission service via a forward link of the target cell;

~~adapted to transmit, via the transceiver to transmit~~, an indication of the MS's intent to switch to the target cell;

~~adapted to receive, via the transceiver to receive~~, an indication that the target cell is presently unavailable to provide data transmission service to the MS via the forward link of the target cell.

### **Claim Rejections - 35 USC § 103**

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sundar et al. (Pub. No. US 2003/0134636 A1) in view of Soong et al. (Pub. No. US 2004/0166865 A1).

**Claim 1**, Sundar teaches a method for providing forward link packet data service to mobile stations (MSs) in a mobile communication system (Mobile Station receiving cell ID data from Legacy MSC via BTS forward link of Fig. 5), the method comprising: providing, by a cell in the mobile communication system (geographic area of coverage of BTS of Fig. 5), data transmission services via a forward link (information transmission of cell-ids to the mobile station ref. by page 4 para. [0068]). Sundar does not teach indicating by the cell to an MS that the cell will not provide data transmission service to the MS via the forward link.

Art Unit: 2616

Soong teaches indicating by the cell to an MS that the cell will not provide data transmission service to the MS via the forward link (BSC sending HDM to MS 'A' step g of Fig. 4, indicating the serving BTS will not provide service and identification of a new active set ref. by page 3 para. [0031]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the call recovery method of Soong to the mobile station selection of a WLAN of Sundar for the purpose of simultaneous rescues for multiple mobile stations as suggested by Soong (page 1 para. [0005]).

**Claim 2**, Sundar teaches a method of providing data transmission services comprises providing data transmission services to the MS (Mobile Station receiving cell ID data from Legacy MSC via BTS forward link of Fig. 5). Sundar does not teach wherein indicating that the cell will not provide data transmission service to the MS comprises indicating by the cell, that the cell will no longer provide data transmission service to the MS via the forward link (BSC sending HDM to MS 'A' Step g of Fig. 4, indicating the serving BTS detects MS transmission loss Step a, thus will not provide service and identification of a new active set ref. by page 3 para. [0031]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the call recovery method of Soong to the mobile station selection of a WLAN of Sundar for the purpose of simultaneous rescues for multiple mobile stations as suggested by Soong (page 1 para. [0005]).

**Claim 3**, Sundar teaches a method for MS internetworking WWAN and WLAN. Sundar does not teach wherein indicating to the MS that the cell will not provide data

Art Unit: 2616

transmission service to the MS via the forward link comprises sending a channel assignment message to the MS that indicates that the cell does not support a forward link.

Soong teaches wherein indicating to the MS that the cell will not provide data transmission service to the MS via the forward link comprises sending a channel assignment message to the MS that indicates that the cell does not support a forward link (Handoff Direction Message of Step g of Fig. 4, HDM indicating a new active set for the MS ref. by page 3 para. [0031]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the call recovery method of Soong to the mobile station selection of a WLAN of Sundar for the purpose of simultaneous rescues for multiple mobile stations as suggested by Soong (page 1 para. [0005]).

**Claim 4**, Sundar teaches a method for MS internetworking WWAN and WLAN. Sundar does not teach wherein indicating to the MS that the cell will not provide data transmission service to the MS via the forward link comprises sending a channel assignment message to the MS that indicates that the cell is not part of an active set of the MS.

Soong teaches wherein indicating to the MS that the cell will not provide data transmission service to the MS via the forward link comprises sending a channel assignment message to the MS that indicates that the cell is not part of an active set of the MS (Handoff Direction Message of Step g of Fig. 4, HDM indicating a new active set

Art Unit: 2616

for the MS ref. by page 3 para. [0031] wherein the serving BTS is not part of the new active set).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the call recovery method of Soong to the mobile station selection of a WLAN of Sundar for the purpose of simultaneous rescues for multiple mobile stations as suggested by Soong (page 1 para. [0005]).

**Claim 5**, Sundar teaches a method for MS internetworking WWAN and WLAN. Sundar does not teach determining whether the cell is presently available to provide data transmission service to the MS via the forward link of the cell.

Soong teaches determining whether the cell is presently available to provide data transmission service to the MS via the forward link of the cell (BTS detection of transmission loss with MS in Step a of Fig. 4, transmission loss ref. by page 3 para. [0031]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the call recovery method of Soong to the mobile station selection of a WLAN of Sundar for the purpose of simultaneous rescues for multiple mobile stations as suggested by Soong (page 1 para. [0005]).

**Claim 6**, Sundar teaches a method for MS internetworking WWAN and WLAN. Sundar does not teach wherein determining whether the cell is presently available comprises determining, when creating an active set for the MS, whether the cell is presently available to provide data transmission service to the MS via the forward link of the cell.

Art Unit: 2616

Soong teaches wherein determining whether the cell is presently available comprises determining, when creating an active set for the MS, whether the cell is presently available to provide data transmission service to the MS via the forward link of the cell (BTS transmission of neighbor list to MS wherein the MS sends PSMM measurement for the active set ref. by page 3 para. [0028]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the call recovery method of Soong to the mobile station selection of a WLAN of Sundar for the purpose of simultaneous rescues for multiple mobile stations as suggested by Soong (page 1 para. [0005]).

**Claim 7**, Sundar teaches a method for MS internetworking WWAN and WLAN. Sundar does not teach wherein determining whether the cell is presently available to provide data transmission service to the MS via the forward link of the cell comprises requesting the cell to indicate the cell availability to provide data transmission service to the MS via the forward link of the cell.

Soong teaches wherein determining whether the cell is presently available to provide data transmission service to the MS via the forward link of the cell comprises requesting the cell to indicate the cell availability to provide data transmission service to the MS via the forward link of the cell (BTS transmission of neighbor list to MS wherein the MS sends PSMM measurement for the active set ref. by page 3 para. [0028], wherein the measurement indicate cell availabilitiy).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the call recovery method of Soong to the mobile station



Art Unit: 2616

selection of a WLAN of Sundar for the purpose of simultaneous rescues for multiple mobile stations as suggested by Soong (page 1 para. [0005]).

**Claim 8**, Sundar teaches a method for MS internetworking WWAN and WLAN. Sundar does not teach wherein determining whether the cell is presently available to provide data transmission service to the MS via the forward link of the cell comprises receiving an indication that the cell is presently unavailable to provide data transmission service to the MS via the forward link of the cell.

Soong teaches wherein determining whether the cell is presently available to provide data transmission service to the MS via the forward link of the cell comprises receiving an indication that the cell is presently unavailable to provide data transmission service to the MS via the forward link of the cell (Handoff Direction Message of Step g of Fig. 4, HDM indicating a new active set for the MS ref. by page 3 para. [0031] wherein the serving BTS is not part of the new active set due to transmission loss).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the call recovery method of Soong to the mobile station selection of a WLAN of Sundar for the purpose of simultaneous rescues for multiple mobile stations as suggested by Soong (page 1 para. [0005]).

**Claim 9**, Sundar teaches providing by a serving cell in the mobile communication system data transmission services via a forward link of the serving cell (Mobile Station receiving cell ID data 502 from Legacy MSC via BTS forward link of Fig. 5), providing data transmission services by the cell comprises providing data transmission services by a selected target cell of the MS to at least one MS in the mobile communication

Art Unit: 2616

system other than the MS (MS sends HandOff is needed to WLAN of Fig. 12, requesting a WWAN target MSC ref. by page 6 para. [0078] through a Facility Directive, wherein the target MSC is used with other MSs of Fig.4). Sundar does not teach indicating that the cell will not provide data transmission service to the MS comprises indicating by the serving cell that the cell will not provide data transmission service to the MS via the forward link.

Soong teaches indicating that the cell will not provide data transmission service to the MS comprises indicating by the serving cell that the cell will not provide data transmission service to the MS via the forward link (BSC sending HDM to MS 'A' step g of Fig. 4, indicating the serving BTS will not provide service due to transmission loss and identification of a new active set ref. by page 3 para. [0031]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the call recovery method of Soong to the mobile station selection of a WLAN of Sundar for the purpose of simultaneous rescues for multiple mobile stations as suggested by Soong (page 1 para. [0005]).

**Claim 10**, Sundar teaches providing data transmission services comprises providing data transmission services to the MS by the cell via the forward link (Mobile Station receiving cell ID data 502 from Legacy MSC via BTS forward link of Fig. 5).

**Claim 11**, Sundar teaches a method for MS internetworking WWAN and WLAN. Sundar does not teach indicating to the MS that the cell will not provide data transmission service to the MS via the forward link comprises sending, by the cell, a Universal

Art Unit: 2616

Handoff Direction message (UHDM) that indicates that the cell does not support a forward link.

Soong teaches indicating to the MS that the cell will not provide data transmission service to the MS via the forward link comprises sending, by the cell, a Universal Handoff Direction message (UHDM) that indicates that the cell does not support a forward link (Handoff Direction Message of Step g of Fig. 4, HDM indicating a new active set for the MS ref. by page 3 para. [0031] wherein the serving BTS is not part of the new active set due to transmission loss).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the call recovery method of Soong to the mobile station selection of a WLAN of Sundar for the purpose of simultaneous rescues for multiple mobile stations as suggested by Soong (page 1 para. [0005]).

**Claim 12**, Sundar teaches a method for MS internetworking WWAN and WLAN. Sundar does not teach indicating to the MS that the cell will not provide data transmission service to the MS via the forward link comprises sending, by the cell, a Universal Handoff Direction message (UHDM) that indicates that the cell is not part of an active set of the MS.

Soong teaches indicating to the MS that the cell will not provide data transmission service to the MS via the forward link comprises sending, by the cell, a Universal Handoff Direction message (UHDM) that indicates that the cell is not part of an active set of the MS (Handoff Direction Message of Step g of Fig. 4, HDM indicating a new

Art Unit: 2616

active set for the MS ref. by page 3 para. [0031] wherein the serving BTS is not part of the new active set due to transmission loss).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the call recovery method of Soong to the mobile station selection of a WLAN of Sundar for the purpose of simultaneous rescues for multiple mobile stations as suggested by Soong (page 1 para. [0005]).

**Claim 13**, Sundar teaches a network initiated cancellation of the MS's present cell selection of the cell indicating a need for the MS to select an alternate cell to provide data transmission service to the MS via a forward link (SIP registration cancellation to the MS of the previous serving MSC ref. by page 5 para. [0075]).

Sundar does not teach indicating to the MS that the cell will not provide data transmission service to the MS via the forward link comprises signaling, by the cell. Soong teaches indicating to the MS that the cell will not provide data transmission service to the MS via the forward link comprises signaling, by the cell (BSC sending HDM to MS 'A' step g of Fig. 4, indicating the serving BTS will not provide service and identification of a new active set ref. by page 3 para. [0031]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the call recovery method of Soong to the mobile station selection of a WLAN of Sundar for the purpose of simultaneous rescues for multiple mobile stations as suggested by Soong (page 1 para. [0005]).

Art Unit: 2616

**Claim 52** is rejected under 35 U.S.C. 103(a) as being unpatentable over Sundar and Soong as applied to claims 1, 15, 33, 42, 48 above, and further in view of Koo et al. (Pub No. US 2003/0117969 A1).

**Claim 52**, Sundar teaches a method for MS internetworking WWAN and WLAN. Sundar does not teach indicating to the MS that the cell will not provide data transmission service to the MS via the forward link.

Soong teaches indicating to the MS that the cell will not provide data transmission service to the MS via the forward link (Handoff Direction Message of Step g of Fig. 4, HDM indicating a new active set for the MS ref. by page 3 para. [0031] wherein the serving BTS is not part of the new active set due to transmission loss).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the call recovery method of Soong to the mobile station selection of a WLAN of Sundar for the purpose of simultaneous rescues for multiple mobile stations as suggested by Soong (page 1 para. [0005]).

Sundar and Soong teach a method of call recovery mobile station selection.

Sundar and Soong do not teach signaling the MS via a forward packet data control channel (F-PDCCH) of the cell.

Koo teaches signaling the MS via a forward packet data control channel (F-PDCCH) of the cell (BS transmits gated F-CPCCH to MS of Fig. 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the forward packet data control of Koo to the call recovery mobile station selection of a WLAN of Sundar and Soong for the purpose of mode

Art Unit: 2616

transition between a control hold mode and an active mode for a data service as suggested by Koo (page 2 para. [0016]).

***Allowable Subject Matter***

2. Claims 15-41 are allowed.

***Response to Arguments***

Applicant's arguments with respect to claims 1-52 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raj K. Jain whose telephone number is 571-272-3145.

The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Raj K. Jain*



**Art Unit 2616**

March 21, 2007